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CAUSES OF LABOR TURNOVER

BY PAUL F. BRISSENDEN
AND EMIL FRANKEL

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CAUSES OF LABOR TURNOVER

BY PAUL F. BRISSENDEN* AND EMIL FRANKEL†

THE reasons for employees leaving the service of an industrial establishment may be traced back either to purely voluntary action on their part, generally caused by dissatisfaction with the prevailing conditions of employment, or to action initiated by the employer and due either to curtailment of industrial activities or to dissatisfaction with the services of certain of his employees. Separations occurring on the employee's own initiative are referred to in this article as voluntary separations or quits; and those resulting from the affirmative action of the employer are referred to as lay-offs or discharges, as the circumstances indicate. In attempting to get some conception of the relative responsibility of the various influences bearing upon the mobility of labor it is highly important to give some special consideration to each of these three types of separations. In the figures presented here on the nature of separations, "quits" are taken to include all voluntary separations, including withdrawals due to death, marriage, etc.

Discharges nearly always mean dismissal "for cause," which presupposes some form of incapacity for the work or at least what is believed to be some defect in the character of the employee. Under lay-offs are grouped those who are "let out" either temporarily or permanently whether because of the completion of the job or because of shortage of the particular work at which the laid-off employee was en-

gaged. Lay-offs are not voluntary separations and have nothing to do with the character of the employee. Lay-offs, moreover, seldom are made for a definite length of time and a large proportion of laid-off employees, as a matter of fact, never return to the same establishment from which they were laid off.

The figures presented in this article are based upon the results of extensive investigations of labor turnover made by the United States Bureau of Labor Statistics. The Bureau's inquiries included (1) a pre-war inquiry made in 1915 and 1916, and reporting in a general way the extent of turnover during the five-year period 1910-1915 and, in more detail for the years 1913 and 1914, not only the causes and extent of it, but also the efforts that were being made to reduce it; and (2) a war-time investigation made in 1918, resulting in an intensive report of the turnover situation for the 12-month period ended May 31, 1918. By the use of material secured by correspondence, some of the data from these field investigations were brought down to January 1, 1920. The returns from the two inquiries cover upwards of 260 industrial establishments, employing over 500,000 workers, in 17 of the most important industrial states.¹

II

The relative extent to which separations take place under the three sets of circumstances (i.e., specified as quits,

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¹ For an official summary of the results of these investigations, see the writers' article on "Mobility of Labor in American Industry," 10 *Monthly Labor Review* 1342-1362 (June, 1920).

TABLE 1. TYPE OF SEPARATION (DISCHARGE, LAY-OFF, OR VOLUNTARY QUITTING) OF EMPLOYEES LEAVING, BY YEARS FROM 1910 TO 1915, INCLUSIVE, AND FOR THE 12-MONTH PERIOD ENDING MAY 31, 1918

Year	NUMBER OF ESTABLISHMENTS	NUMBER OF FULL-YEAR WORKERS	TOTAL LABOR HOURS (THOUSANDS)	ACCESSIONS	SEPARATIONS			
					Discharges	Lay-offs	Voluntary Separations	Total
1910.....	7	23,273	69,819	15,936	2,608	514	14,280	17,352
1911.....	13	56,577	169,731	53,506	9,837	5,082	35,716	50,635
1912.....	20	72,526	217,578	78,843	13,628	4,057	49,806	67,491
1913.....	35	134,823	404,469	182,276	32,064	13,334	141,035	186,463
1914.....	50	118,195	354,585	82,585	19,565	29,737	46,660	95,962
1915.....	28	78,984	236,952	50,421	8,916	8,536	26,862	42,344
1917-18.....	108	207,303	621,909	393,164	51,400	29,833	299,157	380,390
Total.....	261	691,681	2,075,043	856,731	136,078	91,093	613,466	840,637

Year	RATE, PER FULL-YEAR WORKER, OF—					PERCENTAGE OF TOTAL SEPARATIONS DUE TO—		
	Accession	Separation			Total	Discharge	Lay-off	Voluntary Separation
		Discharges	Lay-off	Voluntary Separation				
1910.....	.68	.11	.02	.61	.74	15	3	82
1911.....	.95	.17	.09	.63	.89	19	10	71
1912.....	1.09	.19	.06	.69	.94	20	6	74
1913.....	1.35	.24	.10	1.05	1.39	17	7	76
1914.....	.70	.17	.25	.40	.82	20	31	49
1915.....	.64	.09	.11	.34	.54	16	20	63
1917-18.....	1.90	.25	.14	1.44	1.83	14	8	79
Total.....	1.24	.20	.13	.89	1.22	16	11	73

lay-offs, or discharges) or the extent to which accessions (hirings) have to be made, is indicated in this paper by the "rate [of discharge, (total) separation, lay-off, etc.] per full-year worker." The "full-year worker" is one regularly employed the year round. Thus, if a concern employs 500 men continuously for twelve months and 800 additional men for six months only, the number of equivalent full-year workers would be 900. Eight hundred men working six months, obviously, are the equivalent of 400 men working a full year. [For the purposes of this inquiry, the "full-year worker" is taken to be one employed 3000 hours (300 ten-hour days) during the year.] In Table 1, for example, the "number of full-year workers" is obtained by dividing the number of labor hours (obtained from factory clock or attendance records) by 3000. The rates are then computed by dividing the number of changes of whatever sort (discharges, lay-offs, etc.) by the number of full-year workers. Thus, in 1917-1918, the employees of the establishments studied left voluntarily at the rate of 1.44 for each regularly employed worker. In the same period the rate of total separation was 1.83. It should be noted here that many employers and employment managers use the expression "percentage of turnover," nearly always signifying by that phrase the number of separations per hundred employees. It will be evident at once that the (total) separation rates given in these pages may be read directly as "turnover percentages" simply by omitting the decimal point. Thus, a separation rate of 1.83 is equivalent to "turnover percentage" of 183.²

In Table 1, opposite page, are given

² A more detailed discussion of this method of computing labor turnover will be found in an article by P. F. Brissenden on "The Measurement of Labor Mobility" 28 *Journal of Political Economy* 441-476 (June, 1920).

the number, rate per full-year worker, and the percentage distribution of all separations, of employees discharged, laid off, and leaving voluntarily. Figures are shown for each year from 1910 to 1915 inclusive and for the 12-month period ending May 31, 1918.

The arresting fact shown in the following rate and percentage distribution figures is that the great bulk of all separations today, as in 1910, is due to voluntary leaving. It also appears from these figures that periods of industrial prosperity are reflected in relatively low, and periods of depression in relatively high, proportions of lay-offs to total separations, and that the lay-off rate is the most sensitive of the three separation rates to changing industrial conditions. Thus, in 1914, when the ratio of quits to total separations was lower than at any other time during the period covered by the figures, the proportion of lay-offs was higher than at any other time, constituting nearly one-third (31 per cent) of all separations, while in the immediately preceding year 1913 lay-offs made up only 7 per cent of all separations. The rate figures indicate that it is not alone the proportion but also the actual rate of lay-off which is thus affected by business activity and depression, the lay-off rate for 1913 being .10, a relatively low figure, and for 1914, .25 per full-year worker, which is an exceedingly high rate for lay-offs.

The discharge rate is evidently subject to less extreme fluctuations than the lay-off rate and it makes up from year to year a more constant proportion of the total separations. There appears, moreover, to be a rather definite relation between the accession and discharge rates due, possibly, to the process of selection which goes on when new workers are taken on in large numbers. The

TABLE 2. TREND OF ACCESSION AND OF CLASSIFIED SEPARATION RATES IN A MIDDLE WESTERN METAL PRODUCTS MANUFACTURING PLANT, BY MONTHS, FROM 1912 TO 1919¹

YEAR ENDED—	AVERAGE NUMBER OF FULL-YEAR WORKERS	MOVING ANNUAL RATE, PER FULL-YEAR WORKER ² OF—				
		Quitting	Lay-off	Discharge	(Total) Separation	Accession
December 31, 1912	1088	1.23	.43	.25	1.90*	2.20
January 31, 1913...	1114	1.28	.40	.26	1.93*	2.28
February 28.....	1138	1.31	.41	.25	1.97*	2.22
March 30.....	1158	1.24	.42	.25	1.91*	2.14
April 30.....	1174	1.21	.41	.25	1.88*	2.08
May 31.....	1185	1.21	.42	.24	1.88*	2.09
June 30.....	1214	1.28	.27	.24	1.80*	2.18
July 31.....	1241	1.29	.44	.24	1.97*	2.05
August 31.....	1245	1.27	.46	.24	1.98*	2.04
September 30.....	1248	1.26	.46	.24	1.96*	2.02
October 31.....	1258	1.24	.49	.26	1.99*	2.04
November 30.....	1264	1.21	.48	.26	1.95*	1.96
December 31.....	1262	1.14	.47	.25	1.87 (.06)	1.81*
January 31, 1914...	1259	1.07	.47	.24	1.78 (.05)	1.73*
February 28.....	1262	1.01	.47	.24	1.73 (.03)	1.70*
March 30.....	1267	.96	.47	.24	1.67*	1.71
April 30.....	1276	.86	.49	.22	1.57*	1.60
May 31.....	1277	.75	.53	.22	1.50*	1.53
June 30.....	1293	.64	.50	.22	1.36*	1.51
July 31.....	1299	.61	.64	.22	1.48*	1.49
August 31.....	1293	.51	.77	.21	1.50 (.11)	1.39*
September 30.....	1279	.49	.80	.20	1.49 (.16)	1.33*
October 31.....	1260	.46	.79	.18	1.43 (.17)	1.26*
November 30.....	1252	.45	.80	.18	1.44 (.18)	1.26*
December 31.....	1234	.44	.81	.16	1.42 (.26)	1.16*
January 31, 1915...	1217	.42	.81	.16	1.39 (.22)	1.17*
February 28.....	1197	.41	.81	.15	1.38 (.26)	1.12*
March 30.....	1176	.39	.81	.12	1.33 (.26)	1.07*
April 30.....	1152	.39	.79	.12	1.30 (.29)	1.01*
May 31.....	1136	.39	.75	.11	1.24 (.37)	.87*
June 30.....	1088	.36	.79	.09	1.24 (.56)	.68*
July 31.....	1053	.38	.53	.07	.99 (.28)	.71*
August 31.....	1049	.42	.38	.07	.87 (.14)	.73*
September 30.....	1050	.44	.36	.07	.87 (.11)	.76*
October 31.....	1050	.46	.34	.07	.86 (.10)	.76*
November 30.....	1047	.50	.32	.05	.86 (.13)	.73*
December 31.....	1047	.54	.31	.05	.91*	1.00
January 31, 1916...	1062	.76	.32	.07	1.14*	1.31
February 29.....	1091	.92	.31	.09	1.32*	1.60
March 30.....	1111	1.17	.30	.11	1.58*	1.78
April 30.....	1128	1.49	.29	.11	1.89*	2.08
May 31.....	1152	1.80	.29	.12	2.21*	2.43
June 30.....	1188	2.00	.18	.14	2.32*	2.70
July 31.....	1225	2.17	.13	.16	2.47*	2.75

TABLE 2. TREND OF ACCESSION AND OF CLASSIFIED SEPARATION RATES IN A MIDDLE WESTERN METAL PRODUCTS MANUFACTURING PLANT, BY MONTHS, FROM 1912 TO 1919¹—(Continued)

YEAR ENDED—	AVERAGE NUMBER OF FULL-YEAR WORKERS	MOVING ANNUAL RATE, PER FULL-YEAR WORKER ² OF—				
		Quitting	Lay-off	Discharge	(Total) Separation	Accession
August 31.....	1249	2.35	.12	.18	2.65*	2.95
September 30.....	1281	2.52	.10	.19	2.81*	3.09
October 31.....	1314	2.67	.10	.20	2.97*	3.32
November 30.....	1355	2.77	.09	.21	3.08*	3.60
December 31.....	1392	2.88	.09	.21	3.18*	3.45
January 31, 1917...	1406	2.86	.08	.20	3.15*	3.25
February 28.....	1413	2.85	.08	.20	3.12*	3.20
March 30.....	1433	2.83	.07	.20	3.10*	3.25
April 30.....	1456	2.79	.07	.20	3.06*	3.21
May 31.....	1463	2.78	.08	.20	3.06*	3.15
June 30.....	1466	2.79	.06	.20	3.05*	3.15
July 31.....	1489	2.90	.03	.19	3.11*	3.36
August 31.....	1515	3.02	.03	.18	3.23*	3.55
September 30.....	1536	3.13	.03	.19	3.35*	3.69
October 31.....	1563	3.14	.04	.19	3.37*	3.68
November 30.....	1588	3.13	.04	.20	3.36*	3.57
December 31.....	1606	3.08	.06	.20	3.33*	3.49
January 31, 1918...	1625	3.02	.06	.20	3.28*	3.45
February 28.....	1634	3.03	.06	.18	3.28*	3.36
March 30.....	1637	3.04	.06	.17	3.27*	3.30
April 30.....	1636	2.95	.07	.17	3.19*	3.29
May 31.....	1651	2.87	.07	.17	3.10*	3.13
June 30.....	1641	2.83	.07	.16	3.05 (.03)	3.02*
July 31.....	1645	2.73	.06	.16	2.95*	3.09
August 31.....	1652	2.62	.07	.17	2.86*	2.90
September 30.....	1654	2.60	.07	.17	2.84*	2.86
October 31.....	1642	2.65	.46	.17	3.28 (.47)	2.81*
November 30.....	1591	2.67	.51	.16	3.34 (.26)	3.08*
December 31.....	1560	2.67	.49	.17	3.33 (.07)	3.26*
January 31, 1919...	1547	2.70	.49	.19	3.37*	3.40
February 28.....	1530	2.67	.54	.20	3.41 (.07)	3.34*
March 30.....	1512	2.56	.56	.22	3.34 (.13)	3.21*
April 30.....	1475	2.47	.67	.25	3.38 (.37)	3.01

¹ Adapted by permission from an article by P. F. Brissenden on "The Measurement of Labor Mobility," 28 *Journal of Political Economy*, 454 (June, 1920).

² These are "smoothed" rates derived (by the method of "moving averages") from the actual rates for each separate month, which latter, in turn, were computed by dividing the actual number of labor changes of each particular kind that occurred during each month by the number of full-year (i.e., 3000-hour) workers employed during that month.

* Those rates of (total) separation which are identical with the rate of replacement are marked with asterisks. In these cases all of the separations are immediately (or very soon) replaced. The unmarked (total) separation rates contain a small proportion (indicated by the labor curtailment rate shown in parenthesis) of separations which are not replaced for a considerable period of time, if at all. The reason that they are not replaced is, obviously, that they are brought about by a more or less permanent reduction of the work-force.

consequence of the stimulating effect of business prosperity in boosting the voluntary leaving rates may be seen in the high rates of total separation in spite of the fact that the lay-off rates are relatively low. In periods of depression both the rates and the proportions of lay-off and discharge are larger than in periods of prosperity. This is due to the fact that when depression sets in there are unusually large numbers laid off and employees are discharged more freely than would be the case when labor is urgently needed.

The influence of the prevailing industrial conditions not only upon the separation rate as a whole but more specifically upon the three types of separation—quitting, lay-off, and discharge, which make up this rate—is shown in Table 2, which gives the trend, from 1912 to 1919, of accession (hiring) and classified separation rates in a middle western metal products manufacturing plant. This trend, in so far as the separation rates are concerned, is shown graphically in the chart on page 658.

Perhaps the most striking fact brought out by this chart is the very close way in which the quitting rate parallels the separation rate, the margin being relatively wide in periods of depression and relatively narrow in periods of great industrial activity. At the period at which the separation rate generally declines the lay-off rate at first shows a decided upward trend but the discharge rate declines even more rapidly than the separation rate as a whole. In the period of increasing industrial activity, especially during the war period, the discharge rate runs along at about the same relatively low level, while the lay-off rate steadily declines, reaching its lowest point at a period which marks the greatest activity in this plant.

III

The form of the lay-off rate curve in the early part of the 7-year period shows that it was the great increase in the number of men laid off in the latter part of 1914 that raised the separation rate during that time so considerably above the accession rate. This shows how inaccurate the separation curve would be if taken to measure "turn-over"—unless that term is to be used in reference to something entirely different from the amount of change involved in maintenance, that is to say—replacement. Almost the whole margin, in this part of the period, between the separation and accession rates is due to increased lay-offs, i.e., to a (more or less) permanent decrease in the size of the standard working force. Remarkable reductions took place during the first three-and-a-half years, in both the quitting and discharge rates. When the war began in Europe this establishment had, apparently, gone a long way toward the elimination of discharges as a factor in turn-over. In the three years from 1912 to 1915, it reduced its rate of discharge from .25 to .05 per full-year worker, or 80 per cent. But during the war period from December 31, 1915, to April 30, 1919, the discharge rate increased 400 per cent. The most important pre-war reduction is, of course, in the quitting rate, because the quitters are responsible for the bulk of the turnover. This company's quitting rate went down from 1.23 in January, 1912, to .36 in June, 1915, a decline of 71 per cent. But the quitting rate increased 357 per cent between December 31, 1915, and April 30, 1919. It is quite evident, as has been pointed out, that it is the quitting rate which primarily determines the total separation rate.

The disturbing effect of war condi-

tions is very evident. Both accession and separation rates had risen in 1918 to points far above the high points of the 1912-1915 period. An examination of the accession rate and the different separation rates (shown in Table 2) indicates that the war pushed all rates except the lay-off rate well above the remarkably low points reached in 1915. Worse yet, the chart shows that it pushed all except the lay-off and discharge rates back to a point even higher than the maximum rates of 1912, so that total separation and accession rates and the replacement rate, which in this case is identical

with the separation rate, rose to points never before reached within the period covered by the figures reported. It is interesting to note the effect of the war on the lay-off rate. During the period 1912-1915 it was reduced 28 per cent. War conditions apparently greatly accelerated this reduction and showed a lay-off rate of .07 per full-year worker for the year ending May 31, 1918, as compared with .31 for the year 1915—a reduction of 77 per cent. But in the latter part of 1918, the lay-off rate began to rise and the rate for the year ending April 30, 1919, stood at .67, the highest it had been since 1915. De-

TABLE 3. NUMBER OF ESTABLISHMENTS IN WHICH CLASSIFIED PROPORTIONS OF THE TOTAL SEPARATIONS ARE ATTRIBUTABLE, RESPECTIVELY, TO DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, AND VOLUNTARY QUITTING, 1913-14 AND 1917-18

PERCENTAGES OF TOTAL SEPARATIONS	NUMBER OF ESTABLISHMENTS HAVING CLASSIFIED PERCENTAGES OF THE TOTAL SEPARATIONS DUE TO EMPLOYEES HAVING—			PERCENTAGE OF TOTAL SEPARATIONS	NUMBER OF ESTAB- LISHMENTS HAVING CLASSIFIED PERCENT- AGES OF THE TOTAL SEPARATIONS DUE TO EMPLOYEES HAVING QUIT
	Been Dis- charged	Been Laid Off	Entered Military Service		
1913-14					
5 or less.....	6	8	.....	40 or less.....	13
Over 5 to 10.....	7	10	.....	Over 40 to 50.....	11
“ 10 to 15.....	13	6	.....	“ 50 to 60.....	12
“ 15 to 20.....	6	4	.....	“ 60 to 70.....	7
“ 20 to 25.....	6	2	.....	“ 70 to 80.....	11
“ 25 to 30.....	9	..	.....	“ 80 to 90.....	9
“ 30.....	19	18	.....	“ 90 to 100.....	3
Total.....	66	48	.....	Total.....	66
1917-18					
5 or less.....	24	34	43	40 or less.....	3
Over 5 to 10.....	39	15	49	Over 40 to 50.....	4
“ 10 to 15.....	22	6	5	“ 50 to 60.....	6
“ 15 to 20.....	13	1	7	“ 60 to 70.....	18
“ 20 to 25.....	5	2	1	“ 70 to 80.....	31
“ 25 to 30.....	3	5	.....	“ 80 to 90.....	37
“ 30.....	1	5	.....	“ 90 to 100.....	9
Total.....	107	68	105	Total.....	108

TABLE 4. NUMBER AND RATE PER 10,000 LABOR HOURS OF EMPLOYEES DISCHARGED, LAID OFF, ENTERING MILITARY SERVICE AND LEAVING VOLUNTARILY, BY INDUSTRY GROUPS, 1913-14 AND 1917-18

INDUSTRY GROUP	NUMBER OF ESTABLISHMENTS	NUMBER OF FULL-YEAR WORKERS	TOTAL LABOR HOURS (THOUSANDS)	NUMBER OF EMPLOYEES LEAVING WHO—				
				Were Discharged	Were Laid Off	Entered Military Service	Left Voluntarily	Total
1913-1914								
Automobiles and Parts	14	31,420	91,260	11,835	17,366		21,580	50,781
Chemical Industries and Refineries	3	2,900	8,700	515	362		362	3,024
Clothing and Textile Manufacturing	3	2,588	7,764	447	58		1,434	1,939
Furniture and Millwork								
Leather and Rubber Goods	4	9,018	27,054	2,066	922		9,117	12,105
Machinery Manufacturing	10	23,039	69,117	2,664	5,106		8,169	15,939
Mercantile Establishments (Wholesale and Retail)	7	7,113	21,339	243	772		2,337	2,772
Miscellaneous Metal Products Manufacturing	17	46,495	139,485	7,979	5,368		37,422	50,769
Printing and Publishing	5	5,566	16,698	857	515		2,307	3,679
Public Utilities: Gas and Electricity Mfg.	1	650	1,950	42	27		133	202
Street Railways	3	15,540	46,620	2,549	15,540		1,797	4,346
Telephone Service	3	21,801	65,403	1,713	3,924		5,149	10,786
Slaughtering and Meat Packing								
Total	60	166,130	498,390	30,910	34,420		90,577	155,907
1917-1918								
Automobiles and Parts	16	68,799	206,397	14,623	10,420	10,599	93,001	128,643
Chemical Industries and Refineries	7	7,549	226,617	2,430	756	1,175	20,848	25,209
Clothing and Textile Manufacturing	4	2,098	6,294	264	22	61	2,633	2,980
Furniture and Millwork	1	275	825	26		30	649	705
Leather and Rubber Goods	2	4,443	13,329	902	52	440	9,813	11,207
Machinery Manufacturing	21	29,185	87,555	3,786	1,658	2,959	33,628	42,031
Mercantile Establishments (Wholesale and Retail)	5	7,362	22,086	837	3,972	522	10,432	15,763
Miscellaneous Metal Products Manufacturing	27	15,453	46,359	3,932	896	2,027	32,669	39,515
Printing and Publishing	3	1,628	4,884	90	1	158	2,909	3,158
Public Utilities: Gas and Electricity Mfg.	5	11,566	34,698	1,162	5,624	1,680	9,221	17,687
Street Railways	3	8,882	26,646	1,697	55	951	5,681	8,384
Telephone Service	10	21,338	64,014	3,354	2,362	1,353	14,795	21,864
Slaughtering and Meat Packing	4	28,725	86,175	18,306	4,015	1,945	39,278	63,244
Total	108	207,303	621,909	51,400	29,833	23,600	275,557	380,390

	RATE, PER FULL-YEAR WORKER, OF									
	1913-1914					1917-1918				
	Dis-charge	Lay-off	Entry into Military Service	Leaving Voluntarily	Total	Dis-charge	Lay-off	Entry into Military Service	Leaving Voluntarily	Total
Automobiles and Parts.....	.38	.55	.....	.69	1.62	.21	.15	.15	1.35	1.86
Chemical Industries and Refineries.....	.18	.12	.....	.74	1.04	.32	.10	.16	2.76	3.34
Clothing and Textile Manufacturing.....	.17	.02	.....	.56	.75	.13	.01	.03	1.25	1.43
Furniture and Millwork.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leather and Rubber Goods.....	.23	.10	.....	1.01	1.34	.20	.01	.11	2.21	2.52
Machinery Manufacturing.....	.12	.22	.....	.35	.69	.13	.06	.10	1.15	1.44
Mercantile Establishments (Wholesale and Retail).....	.03	.11	.....	.19	.33	.11	.54	.07	1.42	2.17
Miscellaneous Chemical Products Manufacturing.....	.17	.09	.....	.80	1.08	.26	.06	.13	2.12	2.57
Printing and Publishing.....	.15	.04	.....	.41	.65	.05	.0	.10	1.79	1.94
Public Utilities.....	.07	.04	.....	.20	.31	.16	.11	.06	.69	1.02
Gas and Electricity Mfg.....	.07	.....	.....	.12	.29	.19	.49	.14	.80	1.53
Street Railways.....	.17	.18	.....	.24	.59	.19	.01	.11	.64	.95
Telephone Service.....	.08	.....	.....	.....	.....	.64	.14	.06	1.37	2.21
Slaughtering and Meat Packing.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average.....	.19	.21	.....	.55	.95	.25	.14	.11	1.33	1.83

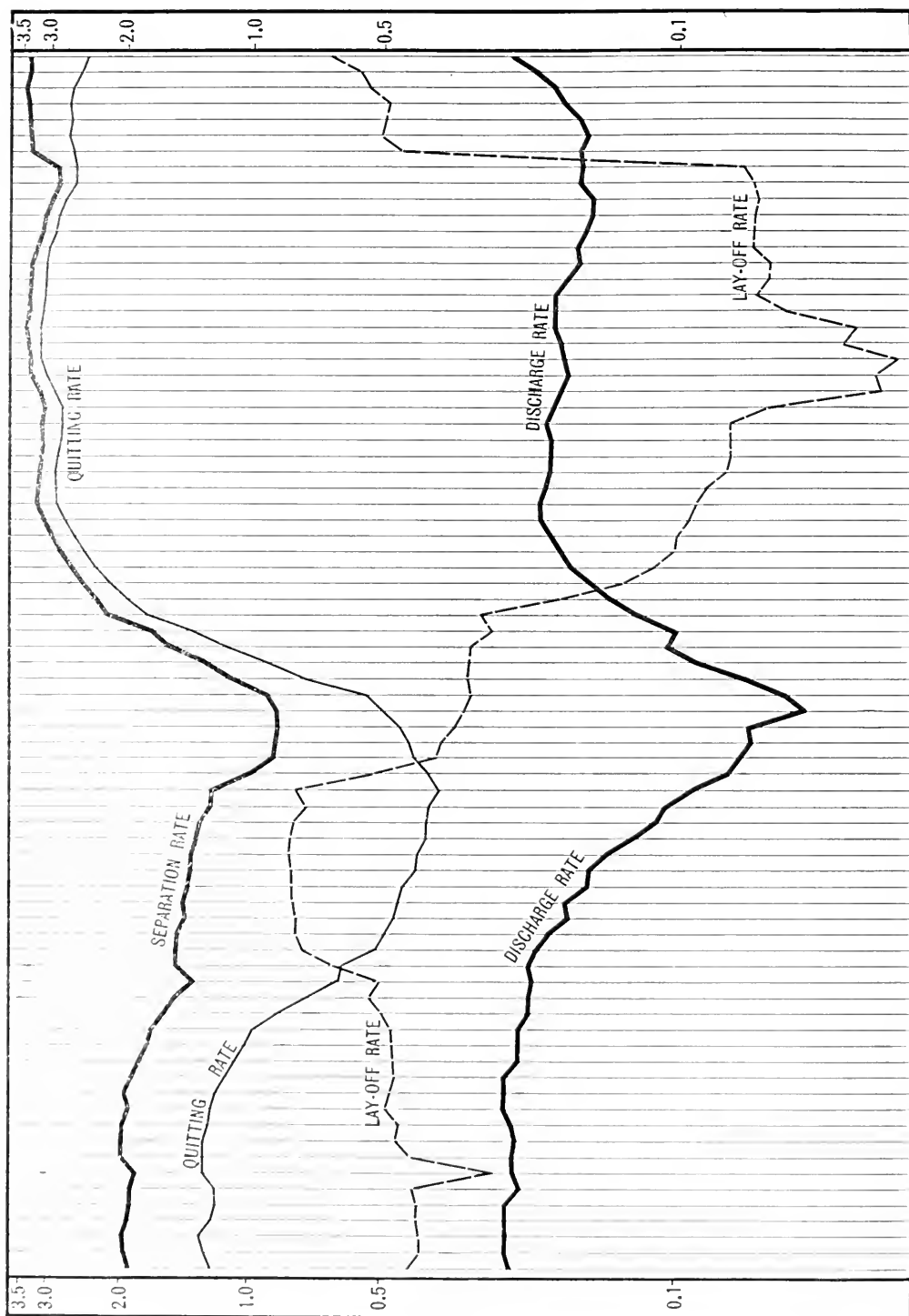
a Less than .005.

spite the increased war demand for labor the discharge rate increased from .05 in 1915 to .17 in 1918, an increase of 229 per cent. It has continued to rise, and stood at .25 for the year ending April 30, 1919.

IV

The proportions of the total separations in industrial establishments due to discharge, lay-off, and (voluntary) quitting in the period 1913-1914, and to discharge, lay-off, entry into military service, and quitting in 1917-1918, are shown in Table 3 (page 655).

It is evident that the war period brought about a considerable decrease in the proportion of discharges and in the number of establishments having a heavy proportion of separations due to discharges. The war period had the same effect upon lay-offs, but on the contrary, it brought about a great increase in the number of establishments having a heavy proportion of separations due to voluntary leaving. The mobility-rate figures of Table 3 for 66 establishments reporting in 1914 and 107 establishments reporting in 1918 indicate that discharges in 1918 made up over 30 per cent of all separations in less than 1 per cent of the establishments reporting, whereas in 1914 they bulked that large in nearly one-third of the establishments reporting. As to lay-offs, the same figures demonstrate that in 1918 they constituted over 30 per cent of all separations in less than 8 per cent of the establishments reporting, but in 1914 they made up over 30 per cent of all separations in over 37 per cent of the establishments. Voluntary quits in 1918 made up over 80 per cent of all separations in nearly half of the establishments reporting, while in 1914 they constituted this large a proportion in less than one-fifth of the concerns reporting.



How the relative proportions of discharges and voluntary separations have changed during the last few years may be seen from the figures for a large machine tool manufacturing establishment. The percentage of employees leaving voluntarily, as against the total number of separations, for each of the three years ending June 30, 1916, 1917, and 1918, and for the three-months' period, July to September, 1918, inclusive, for the day force, were 80, 81, 86, and 92, respectively. The percentages of voluntary separations for the night force, for the same periods, were 77, 82, 91, and 96 per cent, respectively. The ratio of discharged employees for the day force for the years ending June 30, 1916, 1917, and 1918, and for the three-month period, July to September, 1918, inclusive, were 20, 19, 14, and 8 per cent respectively. During the same periods the night force showed the following percentages of discharges: 23, 18, 9, and 5, respectively. Quitting became more frequent; firing much less frequent.

In Table 4, the subdivided separation rates are classified according to the various industry groups covered in the two investigations.

These figures bring out some rather important and significant facts with regard to various industries. It is evident, for example, that mercantile establishments had the minimum discharge rate in 1914 and printing and publishing plants in 1918; the minimum lay-off rate in 1914 was in clothing and textiles and in 1918 in printing and publishing; and the minimum quitting rate in 1914 was in the street railway industry and in 1918 in the telephone service. The maximum discharge rate was in the automobile industry in 1914 and in the slaughtering and meat-packing industry in 1918. The maximum lay-off rate in 1914 was in the

automobile industry and in 1918 in mercantile establishments, and the maximum quitting rate was in leather and rubber goods in 1914 and in chemical industries in 1918. The figures show, furthermore, that in 1914 in the automobile group discharges and lay-offs made up over half of all separations but that by 1918 they had been reduced to less than one-fourth of all separations. In the miscellaneous metal products industries, discharges, and lay-offs constituted in 1914 nearly one-third of all separations but by 1918 they had been cut down to about one-eighth of the total separations. In mercantile establishments, on the other hand, discharges and lay-offs bulk about as heavily among the separations in the earlier as in the later period, making up nearly half of all separations both then and now.

V

An attempt to establish some relation between the particular type of separations and the relative skill of the separating employee is made in Table 5 in which are classified the returns from 22 establishments which reported mobility figures for skilled and unskilled employees separately.

The degree of occupational training and skill possessed by the employees appears to make little or no difference in the proportion of quits, discharges, and lay-offs in the total number of separations. The percentage distribution figures show that 76 per cent of the skilled employees and 72 per cent of the unskilled employees who left, did so voluntarily; 15 per cent of the skilled and 19 per cent of the unskilled were discharged, and 10 per cent of the skilled and 9 per cent of the unskilled employees leaving were laid off. The situation is quite different, however, with regard to the actual

TABLE 5. COMPARISON OF SEPARATION RATES OF SKILLED AND UNSKILLED EMPLOYEES LEAVING VOLUNTARILY, DISCHARGED, AND LAID OFF DURING ONE YEAR (1913, 1914, and 1915; 22 establishments reporting)

	SEPARATIONS DURING YEAR					
	Number		Rate Per Full-Year Worker ¹		Percentage Distribution	
	Skilled	Unskilled	Skilled	Unskilled	Skilled	Unskilled
All Separations:	16,484	22,251	.66	1.41	100	100
Quits.....	12,451	16,093	.51	1.03	76	72
Discharges.....	2,432	4,171	.09	.27	15	19
Lay-offs.....	1,601	1,987	.06	.12	10	9

¹ Based on 74,199,000 skilled-labor hours and 46,980,000 unskilled-labor hours put in during year in the 22 establishments.

rate of separation, the figures indicating conclusively that the lay-off, discharge, and quitting rates, and, of course, the total separation rate, are each much higher for unskilled than for skilled workers, the total separation rate being .66 for skilled and 1.41 for unskilled workers. The subdivided separation rates show about the same relation between skilled and unskilled so that it would appear that skilled workers are about twice as stable as semiskilled and unskilled ones.

VI

In Table 6 the relation between the type of separation and the size of establishment is shown on the basis of the mobility figures of the 66 establishments reporting in 1913-1914 and 108 establishments reporting in 1917-1918.

In the period 1913-1914 there is observable quite a marked decrease in the discharge and lay-off rates as the size of the establishment increases. The explanation for this may be sought in the fact that the large-size establishments were less seriously affected

by the industrial depression which made itself felt during that period. The situation is reversed, however, in the period 1917-1918, the discharge and lay-off rates being slightly higher in the larger establishments. In both periods the separation rates as a whole show a slight decrease as the size of the establishment increases.

VII

The need for definite and detailed information on the causes of labor instability is obvious. In order to devise methods of stabilizing the work force and eliminating unnecessary labor changes it is quite necessary to know the factors responsible for the labor shiftings. It is hardly necessary to call attention in this place to the fact that the causes of labor instability present a very vast and complex problem. It is obvious that a determination of these causes, because of their complex nature and the large number of factors to be considered, would necessitate an inquiry of a magnitude quite beyond the scope of the present inquiry. In discussing the

TABLE 6. RELATION BETWEEN SIZE OF ESTABLISHMENT AND TYPE OF SEPARATION
(DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, AND QUITTING) 1913-14
AND 1917-18

NUMBER OF EMPLOYEES	NUMBER OF ESTABLISHMENTS	NUMBER OF WORKERS	TOTAL LABOR HOURS (THOUSANDS)	NUMBER OF EMPLOYEES WHO—				
				Were Discharged	Were Laid Off	Entered Military Service	Quit	Total
1913-1914								
Under 1000.....	29	16,097	48,291	5,929	5,512	.....	12,014	23,455
1000 and under 5000.....	29	72,634	217,902	15,335	18,880	.....	31,698	65,913
5000 and over.....	8	77,399	232,197	9,646	10,028	.....	46,865	66,539
All establishments.....	66	166,130	498,390	30,910	34,420	.....	90,577	155,907
1917-1918								
Under 1000.....	67	32,453	97,359	7,107	3,868	4,110	56,414	71,499
1000 and under 5000.....	32	69,182	207,546	12,952	10,201	8,125	97,097	128,375
5000 and over.....	9	105,668	317,004	31,341	15,764	11,365	122,046	180,516
All establishments.....	108	207,303	621,909	51,400	29,833	23,600	275,557	380,390

	RATE, PER FULL-YEAR WORKER, OF									
	1913-1914					1917-1918				
	Discharge	Lay-off	Entry into Military Service	Quitting	(Total) Separations	Discharge	Lay-off	Entry into Military Service	Quitting	(Total) Separations
Under 1000....	.37	.34	.....	.75	1.46	.22	.12	.13	1.74	2.21
1000 and under 5000.....	.21	.26	.....	.44	.91	.19	.15	.12	1.40	1.86
5000 and over..	.13	.13	.....	.61	.87	.30	.15	.11	1.16	1.72
All establishments.....	.19	.21	.....	.55	.95	.25	.14	.11	1.33	1.83

underlying reasons for separations we are disregarding here the separations from service due to purely industrial conditions and fluctuations in production, that is to say, forced separations, or lay-offs, the occurrence of which depends upon whether or not a particular job has been finished or whether or not industrial depression has set in. No attempt is made here to discuss that part of the labor shifting which is due to maladjustment of labor supply and demand caused by an unorganized labor market, by a defective system of labor distribution, or by maladjustment in the matter of wage levels for

similar work in different localities, etc.

In view, therefore, of the complexity of the problem and the lack of information on the subject it is intended to discuss here, not the causes of mobility that are primarily inherent in the industrial community situation, but the more personal causes of labor shifting as those causes find expression in the separating employee and as they have been classified by individual employers. It is recognized, of course, that the non-industrial and personal causes are inextricably interwoven with the conditions created by the prevailing industrial situation.

In their efforts to stabilize the labor force a number of firms have made attempts to discover the causes of instability and more particularly to find out the immediate, or precipitating, causes for separations from service. They have done this on the assumption that if it were feasible to ascertain the fundamental reasons why men leave their employ, it would be possible, through the tabulation and analysis of those reasons to show the real causes of instability. It was felt, moreover, that if it were practicable to ascertain the real reasons for employees leaving it might then be relatively easy to develop a record which would be of considerable value in the solution of the employment problem in the individual establishments concerned, and so point the way toward greater stability.

Even in this individual method of ascertaining the causes for labor instability there are serious difficulties to be overcome. Employment managers and others in charge of the work force essay to interview an employee who is about to leave of his own accord. This interview is held, of course, before the employee actually severs his connection with the firm. At the interview the employer or his agent tries to secure a frank and truthful statement from the employee regarding the actual reasons which are impelling him to leave. Employers point out, however, the difficulties involved in interviewing prospective quitters. They say that it is difficult to do this even in normal times and that it was especially difficult during the war period because of the more independent attitude assumed by the workers. It is generally found that men leaving service do not like to be questioned too closely regarding their reasons for leaving and often plainly resent such inquiries. It is claimed that in many cases they give

some fictitious excuse rather than a substantial reason and when pressed advance the most plausible reason they can get away with. From the standpoint of the worker it is perhaps not difficult to understand his reluctance to give full information regarding his reasons for leaving.

Such knowledge in the possession of the employer might be disadvantageous to the employee in his search for a new job and it might in other ways have the effect of restricting his freedom of movement. The employee will have observed that nearly all employment departments keep careful records of employees' past history and that employers generally keep each other informed about the movements of former employees. To the difficulties of ascertaining from individual employees the reasons for their leaving there must be added the difficulty of analyzing and classifying the results obtained. It has been the experience of men interviewing prospective quitters that even where the reason for quitting has been obtained it has not always been easy to reduce to a single classifiable category the manifold motives which may have animated the individual in his desire to change jobs. Many employment managers believe that only in the case of discharges can the causes of separation really be definitely known. This is obviously because action in the case of discharge proceeds from the management and the employee has nothing to say about it.

VIII

For the reasons given in the preceding paragraph, the figures on causes for quitting which are presented below cannot be regarded as more than an indication of existing conditions, although employers who have kept such figures have expressed the opinion that

in most cases they point definitely toward certain existing maladjustments and to particular causes that need to be attacked. In Table 7 are given the classified assigned reasons for the voluntary separation and the causes for the discharge of nearly 10,000 employees in six metal trades

in one form or another enters into most of the specified reasons for leaving. For those classified under "better jobs" the question of wages is not supposed to have been the prime motive in making the change, but the governing causes for leaving were said to have been more desirable work, the

TABLE 7. REASONS ADVANCED FOR VOLUNTARY SEPARATION FROM SERVICES OF 8140 EMPLOYEES AND CAUSES FOR DISCHARGE OF 1439 EMPLOYEES, IN 6 METAL TRADES ESTABLISHMENTS

REASON FOR VOLUNTARY SEPARATION	CASES		CAUSE OF DISCHARGE	CASES	
	Num-ber	Per cent		Num-ber	Per cent
Wages—Dissatisfied with Wage Rate, Etc.....	2001	24.6	Incompetent.....	478	33.2
Obtained Better Job or Returned to Former Job	984	12.1	Unreliable.....	422	29.3
Nature of Work—Too Hard, Heavy, Wet, Dusty, Dirty.....	410	5.0	Lazy.....	148	10.3
Dissatisfied.....	674	8.3	Careless.....	66	4.6
Monotony.....	218	2.7	Insubordination.....	93	6.5
Physical Inability—Sickness, Injuries, Etc.....	461	5.7	Misconduct.....	54	3.7
Leaving Town.....	453	5.6	Trouble breeder.....	105	7.3
Return to School.....	131	1.6	Liquor.....	73	5.1
All Other Known Reasons	58	.7			
Military Service.....	737	9.0			
Unknown—Failed to Report.....	2013	24.7			
Total.....	8140	100.0	Total.....	1439	100.0

establishments. Some of the reasons or causes listed in a number of these groups³ have been briefly amplified.

Dissatisfaction with wages is evidently the largest single reason for voluntary separation, and no doubt it is safe to assume that the wage motive

³ A more detailed and scientific classification was impossible because of the necessity for making a combination of the records of the various establishments, each of which put a somewhat different interpretation upon their recorded reasons for leaving or causes for discharge.

location of the plant, etc. Under "nature of work" are classed a considerable number of quitters who under the stimulus of higher wages or the "work-or-fight" order entered mechanical occupations, but not being accustomed to the grease, dirt, noise, etc., inherent in the nature of the work, constantly have shifted in the hope of finding more pleasant work. It has been stated that the relative ease with

which a job could be secured during the war period made workers more ready to throw up jobs which seemed undesirable to them but which in normal times they would be reluctant to leave.

For those classified under "dissatisfied" no one specific reason seems to have been applicable. Employment managers believe that the question of wages or work is seldom a factor with this type of labor, but that its desire to shift is due largely to an inherent instability and that persons of this type are unable to assign any specific or logical reason for their desire to change. Employment managers believe these considerations to be equally true of a large number of those who failed to report before leaving. It is said that the number of employees leaving in this manner during the war period was greater than at any previous time. This is explained by the fact that the shortage of help necessitated the employment of the so-called "floater," a type of workman which in normal times would not be employed at all by these concerns. It has been found to be characteristic of employees of this type that they never stay on a job for more than a brief period, soon dropping out, without giving notice, to accept work elsewhere.

Under "incompetent" employment managers have classified certain workers who after a trial have been found to be unfit or unsuited for the work for which they were hired. It was pointed out that although these persons were willing to work they were found to be incapable of learning the work and were responsible for a great deal of spoiled work. This group also included workers who misrepresented their occupational skill when taken on, as, for example, by using certain acquired phrases that would indicate familiarity with the kind of work

required of them. The number discharged for incompetency, it is asserted, increased during the war period because the urgent need of men made careful selection less possible. The management has classified those as "unreliable" whose attendance record was bad, who were habitually late in the morning, or who were prone to lay off too frequently and for trivial reasons. A good many of those discharged for being unreliable are suspected by employment managers of having looked for jobs, and possibly of having tried out jobs, in other plants, while absent.

Employment managers have classified as "trouble breeders" those who have attempted to create dissatisfaction among their fellow workers by urging or intimidating them to concerted action of some sort, as for instance, the unionizing of the shop or the presentation of demands for wage increases, revision of piece or premium rates, etc. The relatively large number discharged for being "trouble breeders" may, perhaps, be explained by the fact that it is the policy of the establishments from which the figures of the above table have been secured to deal with their industrial workers only as individuals.

IX

A somewhat detailed record of the number of people who left the employ of a large mail order house during 1917 has been compiled and is given in Table 8.

During the year 1917 there occurred in this establishment 22,700 separations. Of this number 5204 or 22.9 per cent, were due to reduction of force, 983 or 4.3 per cent due to entrance into military service. Of the remaining separations, with the causes of which we are here specifically concerned, 13,664, or 60.2 per cent of all,

TABLE 8. REASONS ADVANCED FOR VOLUNTARY SEPARATION FROM SERVICE OF 13,664 EMPLOYEES AND CAUSES FOR DISCHARGE OF 2849 EMPLOYEES, DURING 1917, IN A MAIL ORDER HOUSE

REASONS FOR VOLUNTARY SEPARATION	CASES		CAUSE FOR DISCHARGE	CASES	
	Num-ber	Per cent		Num-ber	Per cent
Other Positions:			Unsatisfactory:		
More Promising Position.....	2080	15.2	Too Slow.....	776	27.2
Better Salary.....	1109	8.1	Indifference.....	352	12.4
Former Position and Return to Trade.....	268	2.0	Carelessness.....	255	9.0
Going into Business....	44	.3	Irregular Attendance.....	309	10.8
To Learn Trade.....	48	.4	References.....	56	2.0
Position Nearer Home..	62	.5	Dishonesty (Suspected of Pilfering, etc.).....	473	16.6
Leaving City.....	2047	15.0	Insubordination.....	327	11.5
To Marry.....	229	1.7	Drinking.....	79	2.8
On Account of Health....	823	6.0	Fighting.....	44	1.5
Dissatisfied:			Financial Difficulties..	13	.5
With Working Conditions.....	755	5.5	Enemy Aliens.....	8	.3
With Salary.....	221	1.6	Other Causes.....	157	5.5
Work Too Hard.....	273	2.0			
Resented Criticism....	134	1.0			
Refused to Be Transferred.....	107	.8			
Refused Temporary Work.....	93	.7			
Did Not Like Supervision.....	67	.5			
Distance Too Great....	92	.7			
To Go To School.....	565	4.1			
To Stay At Home.....	810	5.9			
No Reason:					
Worked Less Than Two Weeks					
Failed to Report....	2527	18.5			
Worked More Than Two Weeks					
Failed to Report....	1310	9.6			
Total.....	13,664	100.0	Total.....	2849	100.0

were voluntary, and 2849, or 12.6 per cent of all, were due to discharges.

It will be seen from the figures of Table 8 that of the total number of voluntary separations about 25 per

cent resulted from employees having obtained either more promising positions or positions which offered higher wages. The number "leaving city" seems to represent a considerable

TABLE 9. NUMBER, PER CENT DISTRIBUTION, AND ANNUAL RATE PER FULL-YEAR WORKER OF EMPLOYEES HIRED AND REHIRED AND OF THOSE LEAVING FOR SPECIFIED REASONS IN YEAR ENDING OCTOBER 31, 1918

(Department Store)

	NUMBER	PER CENT DISTRIBUTION	RATE PER FULL-YEAR WORKER ¹
Accessions: ²			
Hired New	908	80	1.01
Rehired	223	20	.25
Total Accessions	1131	100	1.26
Separations:			
Discharged—			
Incompetent	21	34	.02
Misconduct	13	21	.01
Careless	8	13	.01
Unreliable	8	13	.01
Trouble breeder	5	8	.01
Dishonest	4	6	.3
Lazy	2	3	.3
Insubordinate	1	2	.3
Total discharged	62	100	.07
Laid off	431		.48
Left voluntarily:			
Wages	228	21	.25
Family Moving	154	14	.17
Other Position	135	13	.15
School	127	12	.14
Ill Health	117	11	.13
Needed at Home	75	7	.08
Dissatisfied	48	4	.05
Vacation; Needed Rest	45	4	.05
War	39	4	.04
Marriage (Women)	24	2	.03
Work Too Heavy or Disagreeable	22	2	.02
All Other Reasons ³	61	6	.07
Total Left Voluntarily	1075	100	1.18
Total Separations	1568		1.73

¹ Based on standard working force of 899 full-year workers.

² For nine months ending Oct. 31, 1918.

³ Less than .005.

⁴ "Leaving city," 33; "going into essential work," 6; "going into business," 3; on account of "housing conditions," 2; reasons unknown, 17.

proportion of the total number leaving. It is very doubtful, however, whether this number really left the city; it is quite likely that in the majority of the cases it was only a proffered excuse. Those who were dissatisfied for various reasons number 12.8 per cent of the total. A significant commentary on the whole stability situation in this establishment is implicit in the rather large number of persons who simply dropped out of service without giving any notice of leaving either in advance or subsequently. Nearly 30 per cent of the total number leaving voluntarily left without giving notice.

Among the establishments whose labor turnover experience was examined in some detail by the Bureau of Labor Statistics was one of the largest department stores on the Pacific coast. This store went to no little trouble to ascertain the reasons for employees quitting and to tabulate not only the number quitting for various assigned reasons but also the number discharged for specified cause, assigned, naturally, by the company. This concern also kept account of the proportion of those rehired to new accessions. A full analysis of these records is given in a special report⁴ published by the Bureau of Labor Statistics on the turnover experience of this department store. The tabular summary which appears in that report is herewith reproduced, with some modification, in Table 9 on page 665.

The only classification of the accessions is into "hired new" and "rehired." During the nine months for which data were available, it appears that 20 per cent of all of those hired had been in the company's service at some previous time. Among the reasons assigned for discharge the most frequent seems to have been incompetency, "misconduct," carelessness, and unreliability. Among those leaving voluntarily the most prevalent reasons given are dissatisfaction with wages, desire to take another position (which in some cases is desired because of the higher wage offered) family moving out of town, going to school, and ill health. Using the last column as a basis, it is evident that during the year reported, for each 100 full-time workers employed there were 101 entering the store as new employees, and, in addition, 25 former employees rehired. Turning to the separations, which are our primary concern here, it appears that, for every hundred full-time workers employed, there were 173 separations; 7 of these were discharges, 48 were lay-offs (on account of lack of work) and 118 were quits. Scrutinizing the latter more closely, we find that 25, for every hundred employed, quit on account of unsatisfactory wages, 17 quit because the family was moving, 15 on account of another job, 14 to enter school, 13 because of ill health, 8 because needed at home, 5 because "dissatisfied," the same number for a vacation (without pay) or a needed rest, and 4 for war work.

⁴"Employment Policy and Labor Stability in a Pacific Coast Department Store," by P. F. Brissenden, 9 *Monthly Labor Review* 1399 (November, 1919).

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